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# The Cornell Countryman



CORNELL UNIVERSITY  
COLLEGE OF AGRICULTURE  
ITHACA, N. Y.

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*The Cornell Countryman*

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NEW BARNs AT THE NEW YORK AGRICULTURAL EXPERIMENT STATION, GENEVA, N. Y.



# THE CORNELL COUNTRYMAN

VOL. 2.

OCTOBER, 1904

NO. 1

## THE ESSENTIALS OF A COLLEGE EDUCATION

By Dr. W. H. Jordan,

*Director of the Geneva Experiment Station*

AMONG the most important decisions which a college student must make are those which pertain to the determination of his lines of study. There was a time when these decisions were not to any extent left to the student, one curriculum was open to him and from that no deviation was allowed. Now a system of electives is established in many institutions which allows a student great latitude in selecting the larger part of his work, and it is only required (or should be) that the subjects and arrangement shall be properly co-ordinated. This change from a dogmatic to a liberal treatment of the student we commonly regard as advantageous to his intellectual welfare and to his ultimate success. But the situation has its dangers.

It is obvious that a student's selection of studies will be materially influenced, if not controlled, by his personal estimate of values, and as young men and women enter college for greatly unlike reasons and with widely varying ends in view, it is certain that there will be no agreement as to values, and it is quite likely that some estimates will be neither accurate nor wise. There certainly must be at least a few things in a college training that are alike valuable and necessary to all persons, no matter where they live or what they do.

Emerson once wrote that "life is a search after power." This suggests that the young person seeks a college course in order to acquire greater personal power in some direction. Personal power, power to master, power to control, measures what a man is as an effective force or agent, sometimes in one line of effort and sometimes in another.

Personal power being in the man what steam is in the engine, let us consider what it is in its essentials, how it may be applied and what it should accomplish. We may leave out of discussion all except the student of serious purpose who is moved by a strong determination to accomplish something. How then shall such a student apply his time and energy when in college in order that he may gain the largest degree of personal power, which he may use for the highest and most worthy ends?

The relations which every person must sustain in order to meet life's normal conditions and in which personal power determines influence and success are in general two; the relation of the individual to other individuals either singly or in the mass, in other words the social relation, and the relation to an occupation. While the social and the occupation relations do not stand entirely apart, but are more or less interrelated, we may use this classification for the purposes of discussion.

In what do man's social relations consist? He is a citizen of the nation, of the state and of the municipality. As such, if he is a worthy citizen, he must exercise his civic rights and meet his civic responsibilities. He is a member of a church organization, perhaps, and in this relation or in some other he must meet ethical problems affecting the individual and the community. He lives with others in a home and he may be the largest factor in determining its ideals and standards. These are human relations, the relations of man to man. They involve not only the fulfillment of duty to others but the exercise of influence over others. Whether this duty is met and this in-

fluence exerted so as to promote the highest interest of society and of the individual depends not alone upon a man's moral purpose but in part upon his clearness of vision—upon what he knows of those facts and principles that lie at the base of social and economic conditions. Ignorance of a sound philosophy of social and political conditions, even though "sanctified," is dangerous in any one but a social and political zero.

But even if a man's knowledge is extensive and accurate then his influence, that is, his power over others, outside of example is the power to convince or persuade, a power largely dependent upon an ability to think clearly combined with a readiness of speech and accuracy and attractiveness of expression in presenting the truth.

Besides a man's duty to society there is his obligation to himself which calls upon him to fit himself to get from life's experiences the largest and most satisfactory enjoyments. Literature, art, music, the platform are among his opportunities and his appreciation of these and what he appropriates from them will certainly depend to a large degree upon knowledge of a certain kind. The man who knows little of literature, who does not understand the simple terms of philosophy and to whom much of the vocabulary of this scientific age is meaningless has serious limitations and is scarcely an ideal product of college halls.

It is in the various human relations which call us to the fulfillment of duty, which involve personal influence and in which we find our highest enjoyments that we exercise the chiefest powers with which we are endowed, powers that stand in the most important relations of any to social and individual welfare.

In the light of the foregoing conclusions let us consider the case of the young man who enters college simply in order to fit himself for a particular occupation. This young man, and we fear he is increasingly in evidence, affirms that he is seeking a college training simply because of its commercial value, that is because the college

graduate is likely to command for his time or services a larger money compensation than the non-graduate.

Such a student in selecting his courses generally declares that he wants nothing but that which is "practical" or which bears directly on his chosen occupation. Language, literature, economics, philosophy and ethics, yes, science only so far as it is "practical" he discards as useless for his purpose. He would cultivate to the highest possible degree his ability to do a particular thing and would pay no attention to his intellectual development in any other direction.

There are several reasons why this student decides unwisely.

In the first place, the possession of a knowledge of technical facts combined with skill of the hand and eye does not necessarily give the power which is essential to large success. There is no power in a fact or in a technical process. The power which we are discussing lies in the man and its exercise comes in the use of what he knows. Two men may have equal knowledge of the composition of soils, fertilizers and crops but be very unequal in their success in applying this knowledge, this inequality being due, outside of differences in natural ability, to unlike mental power, that is to unlike ability to reason and co-ordinate facts in their bearing upon a particular problem. Such reasoning power comes from mental discipline and while certain technical studies have high disciplinary value, attention to these alone does not produce a well-rounded and symmetrical mental development,—the result is a one-sided development and the subject of it has serious limitations of mental vision.

Moreover, every occupation has its economic and social relations and success sometimes depends more largely upon a clear vision concerning economic conditions and the ability to direct and control men than it does upon mere technical expertness. The fact is, the man whose vision is clearest and broadest in regard to affairs and society as a whole is, other things being equal, the best equipped man, the man

of the greatest power, whether in business or professional life.

Still further, the student who would pursue only practical studies virtually assumes that a man's occupation is the chief thing in his life. It is so far as bread winning is concerned, but bread winning is properly not so much an end in itself as it is a means to larger ends. Unfortunately men make the gaining of wealth a chief end and aim, but a life so devoted is distorted and misses larger values. If we labor wisely we do so in order that we may have the best possible homes, render the largest possible social service and secure for ourselves in return intellectual and moral enlargement and refinement. Shall the young man assume, then, that the farm or the shop is to be the chiefest thing in his life and shall the college allow him to choose his studies on this basis?

Fortunately some young men, even before the time of entering college arrives, acquire a broad view of what life should be and desire to fit themselves, not only for business success but to be efficient and useful members of society. These have come to perceive, faintly perhaps, that large and true success consists not alone in the

power which a man acquires and uses for mere personal ends, but more largely in the social service which he is able to render.

Students of this class, even though they are fitting themselves for a particular occupation, will not despise the humanities, but will make every effort to so extend their period of study that they will secure a broad and liberal training.

In considering the essentials of personal power the student of agriculture should not be regarded as an exception. There is nowhere a greater opportunity for the fruitful exercise of social and political wisdom and influence than by the man who is to be a leader among the agricultural people. To be an instructive example for the best farm methods is certainly a most worthy position to attain, but to be a good farmer is not necessarily to be a good or useful citizen.

When, however, there is added to business intelligence a wise and strong influence in all that makes for the civic and social welfare of the community we have an illustration of a man who fulfills all the functions of a citizen and who stands as a safeguard against political and social disaster.



## THE MODEL DAIRY OF THE LOUISIANA PURCHASE EXPOSITION

*By C. W. Melick.*

**T**HE Model Dairy of the World's Fair located near the center of the Palace of Agriculture is fully equipped with all of the latest appliances for dairy use. It is built on the show case plan for the purpose of displaying to those who are unfamiliar with dairy work the machinery in operation and the dairy products prepared for the market. To those who are familiar with dairy work it reveals the most sanitary and convenient arrangement of dairy machinery which modern methods can afford.

The operating creamery as it is called is 250 feet long and 20 feet wide with 20 feet between floor and ceiling for ventilation. One entire side of the dairy is lined with small windows at the top for the purpose of lighting. The walls beneath these windows are made of Rinald's porcelain enamel. The large glass plates on the opposite side are 8 by 8 feet in size, and are so set that all operations in the dairy are visible from the outside.

The "Model Dairy" is divided into rooms in the following order: a record room, chemical laboratory, where milk is analyzed from the cows that are in the Dairy Cow Demonstration, a cheese room, a farm dairy room, a creamery room where the pasteurizing and churning is done, a dairy refrigerator, a sanitary milk room where milk is clarified and bottled, a number of wash and store rooms, and a booth where milk, cream and buttermilk are sold.

The milk testing laboratory is equipped with five different styles of Babcock testers furnished by the Vermont Farm Machine Co., of Bellows Falls, Vt., and the Creamery Package Co. of Chicago, Ill.

There is also a display of various products that are manufactured from milk: Casein paste paint, cold water paint, water proof paint, casein glue in paste form, pure milk sugar in crys-

taline form, dry milk containing butter fat, extra pure powdered casein for food purposes, refined commercial milk sugar in powdered form, dry skimmed milk in powdered form, and crude casein from milk.

The cheese room is equipped with three 150-gallon vats, cutters, moulds, presses and a curing room.

The creamery room is furnished with a 150-gallon tempering vat, a Twentieth Century Heater, two sanitary milk pumps, one U. S. cream separator of 1,500 pounds capacity, one Alpha DeLaval cream separator of 3,000 pounds capacity, one Danish Weston cream separator of 3,000 pounds per hour, one Reed pasteurizer and star milk cooler, one 100-gallon ripener and two starter cans, a Sturges & Burns pasteurizer, a Boyd cream ripening vat, a No. A2 Disbrow churn and compressed air pump for forcing the cream from the pasteurizer into the churn. The machinery is all run by motor power.

The farm dairy room is furnished with a Simpson's "Jumbo" mould and cutter, several small churns and printers, and a Karl Kiefer filter.

The sanitary milk plant contains an Alpha DeLaval cream separator of 1,000 capacity, a Farrington pasteurizer, an up-to-date bottle filler, and a ten-ton refrigerating machine, which is used for cooling the dairy refrigerator, milk boxes in the booth, and the water that is used in the creamery department. This ice machine is operated by a fifteen horse power Keystone motor.

This is no doubt the most complete plant of latest scientific machinery that has ever been put in operation.

The dairy is operated in a practical business way as well as for display. Every pound of butter, cream, milk or buttermilk is accounted for by the bookkeeper in the booth.

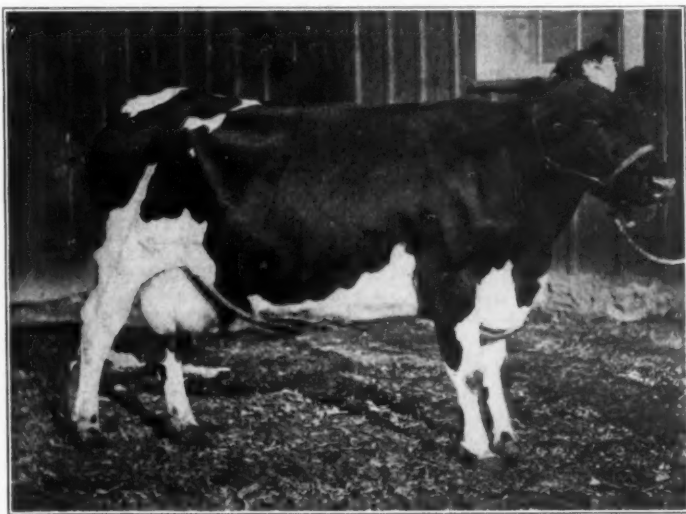
The work in the testing room is done

by a student of the Wisconsin, one of Purdue, and one of Missouri University. The farm dairy room and creamery is operated by a graduate of the University of Nebraska. From one hundred to two hundred pounds of butter are made there every day. It is all sold at the dairy at 25c per pound and there is a demand for more.

These laboratories are under the supervision of Professor Erf of the Kansas Agricultural College.

The sanitary milk plant is run by a student of the Illinois University, and the booth by Miss Bottorff of Purdue

and sample the milk of each cow in the Jersey barn three times every day. They also watch each milker to see that no dishonest work is done. A student of Oberlin College, Ohio, and one of Missouri University conduct the work in the Short Horn barn; one from Ames Agricultural College, Iowa, and one from Missouri have the oversight of the work in the Holstein barn, and one from Illinois University and one from Ames College, Iowa, are in charge of the Brown Swiss barn. The two latter students together with a student from Chicago and Wisconsin



A TYPICAL HOLSTEIN AT 10 YEARS

University. These departments are controlled by the St. Louis Sanitary Dairy Co.

The "Model Dairy" is supplied with milk from the herds on exhibition in the Dairy Cow Demonstration Test. Twenty-five Jerseys, twenty-nine Short Horns, fifteen Holsteins, and five Brown Swiss are competing for \$2,000.00 in prizes offered for the cows producing the largest amount of butter fat and other solids at the least cost for one hundred and twenty days.

A student of the University of Wisconsin and one of Bellevue College, Nebraska, weigh the feed and milk,

Universities figure the amount of butter fat and other solids produced by each cow from the daily reports made by the boys in the testing laboratory. They also figure the cost of feed and value of milk products.

This test is being carried on under the supervision of Professor Farrington of the University of Wisconsin.

Every student employed has had special training in agricultural work, most of them having specialized in Dairy Husbandry. The entire system is a unique, practical plan, where a great deal of information may be obtained by visitors to the fair.



## THE AGRICULTURAL STUDENT'S OBLIGATION

By *H. W. Collingwood,*

*Editor Rural New Yorker*

**I**T seems to be settled in all civilized countries that three classes of citizens are entitled to a trade education at public expense. The soldier, the sailor and the farmer are selected as peculiar wards of the State. Soldier and sailor fight for their country. It is generally understood that the life of the educated soldier belongs to his country. Since he paid the State nothing for his training his life is a constant demand note, and he must pay the obligation at call. A West Point graduate who refused to serve in the army in time of a just and unavoidable war would be voted an ungrateful fellow who shirked an obligation.

Many of us who have obtained our education at an agricultural college fail to realize that the obligation to the Fatherland is really as great with us as with the educated soldier. If we will stop and think for a moment this point will be made clear. Society does not train lawyers, doctors and carpenters out of its own pocket, but for ages it has been thought wise to train special men to fight for the rest. The reason why the farmer was included with the fighter in this class was because civilization has taught us that the man who feeds his countrymen is a more useful citizen than he who fights for them, and that special training is as necessary for the feeders of a nation as for its fighters. Many reasons have been given for the founding of our agricultural colleges and the efforts to organize a system of agricultural education distinct from the old idea of a classical college training. The true reason for it was found in the clear-eyed vision of far-seeing men who saw that the most useful citizen of the country must be broadened and taught along the line of his own work. As we dignify and ennoble the life of the feeder we shall bring the balance of the power back from the hands of the fighter.

I would like to point out to every

agricultural student at Cornell that when he accepts the offer of a farmer's education he assumes an obligation. His country has just as much right to demand his services as she has to call upon the educated soldier at West Point or the educated sailor at Annapolis. Some of our colleges have struggled on with so few students that a boy was almost justified in thinking he put the college under obligation to himself for attending it. That time has gone, and it should now be a part of the creed of every agricultural college in the land that when the State educates a farmer the State has a right to a share of that farmer's life. I have heard old teachers say that the defect in the proposed agricultural education is that it cuts out all the spiritual side of the classical course, and leaves nothing but the material side. They say it is like eating bread and butter in a boarding house, when the meal should carry an idea of what home costs and means. I know that this objection has kept some farmers from sending their boys to an agricultural college. I would remove it by making college and student remember the obligation to country.

I have often wondered just why young men attended agricultural colleges twenty years ago. Many of them cannot give the real reason. In my own case I know that two facts led me to an agricultural course. There had come into my life a settled and unconquerable feeling that I could not be satisfied until I had at least tried to obtain an education of some sort. At that time I did not know what "education" means, and therefore lost much of the inspiration that should go with it. I entered an agricultural college because the qualifications for admission were within my reach, and it was possible for me to pay my way with my own labor. I did not realize at that time, nor did my classmates realize the nobler purpose for which the col-



lege was established. It was to us a public convenience, a cheap source of education such as it was, and I regret to say that we patronized it with what seems to me now a selfish motive. I regret that the early agricultural colleges did not start with something of the following proposition to young men:

*"Your country needs you on the farm as land owner and worker. While we respect the ambition of any young man to help himself and train his powers for his own benefit this institution is supported not so much to put education within reach of the individual as to strengthen and dignify agriculture. As military and naval students take the oath of allegiance to their country, so those who enter here to study at public expense assume a public obligation!"*

The earlier colleges felt themselves too weak and too poor to make this the dominating idea of their life. That is one reason why they failed for so long. The State wrongly judged their success by the number of students they attracted. They could only compete with other institutions with the advantage of free tuition. In some cases their courses were arranged so as to help this unfair competition with in-

stitutions not supported by the State. No college or student can have true power as a mere imitator. If the agricultural colleges are to endure they must teach agriculture in such a way that it will inspire students to realize the obligation I have mentioned. I want to say these things now because the Agricultural College of Cornell University is entering upon a new era. It has now the strong backing of the State, and what is of far greater importance, the expectant confidence of the farmers of New York State. I doubt whether the history of education in this country records a greater educational opportunity than has been offered Cornell. I doubt whether the University yet realizes it fully. This opportunity will be met less by members of the faculty than by students who feel under obligations to do certain definite things:—

Own a piece of farm land.

Work with their own hands upon it if possible.

Never disparage the business of farming, but talk of its possibilities rather than its advantages.

Act as a missionary to carry the knowledge of agricultural science down as well as up.

Feel that by doing these things you are serving your country.

## FORGET-ME-NOT

WHEN to the flowers so beautiful—

The Father gave a name,  
Back came a little blue-eyed one  
(All timidly it came)

And standing at its Father's feet,  
And gazing in his face—

It said in low and trembling tones,  
With sweet and gentle grace  
"Dear God, the name thou gavest  
me

Alas! I have forgot."  
Then kindly looked the Father  
down,

And said, "Forget-me-not."

—Selected.

## FROM CITY TO COUNTRY

*By Lee A. Chase, Cornell '04.*

THE College of Agriculture is an institution primarily for the instruction of farmers' sons. It offers them an opportunity for the study of the natural sciences and of their bearing on agriculture. It prepares them to become farmers just as other professional and technical courses prepare men to become doctors, lawyers or engineers.

If the course is for the farmers' sons, why do so many city men enter it? Surely a college course cannot make a farmer out of a man who does not know a plow from a horse-rake. A knowledge of the chemical composition of plants or of their Latin names will not enable a man to plow a straight furrow.

We have all heard similar remarks. But why, then, do so many men come directly from the farm to the college of Law or Medicine or Engineering? These boys know just as little of the professions which they have chosen as do their city friends know of practical agriculture. Yet we do not insist that a country boy practice medicine for a time to get experience before he goes to college. Why insist that a city boy spend some time on a farm before entering an agricultural college?

His work in college will be a direct preparation for future work on the farm. A one or two years' special course, including a large amount of

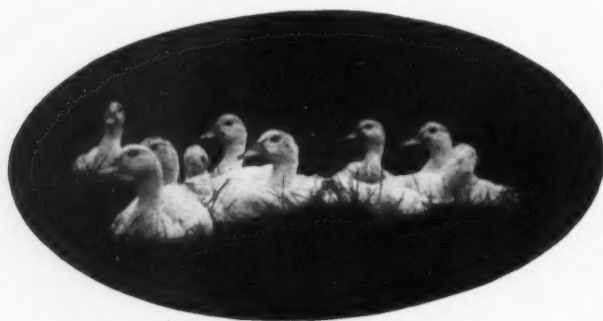
practical work under competent instruction, will familiarize him with farm methods as the same length of time spent in aimless farming could not do. While he must still acquire experience before he can operate a farm with profit, he will gain that experience much more quickly and with less expense than if he had not gone to college.

The regular four years' course offers even better opportunities. The general culture, the knowledge of the sciences which are related to agriculture, and the more detailed study of purely agricultural subjects which it affords combine to make the graduate a more successful farmer and a happier man.

The course offers, also, excellent preparation for some work which does not involve actual farm practice. Chemistry, Botany, Dairy, Landscape Architecture, Nature Study and Forestry open opportunities for those who do not intend to become farmers.

Whatever may be their special purpose for coming to college the enthusiasm about them, the earnest work of their teachers and the attractiveness of the subjects can not fail to exert a strong influence.

Let us not look with pity on the city boy who is studying agriculture in college. He has chosen that calling and is preparing for it in the wisest way.



## CORNELL'S NEW POULTRY BUILDING

*By Professor J. E. Rice*

**D**URING the summer a new building has been erected which is to be known as the Poultry Headquarters. This is the main building of the Poultry Department. It is a two-story structure, 46 feet long by 30 feet wide, with a basement under the entire building. It has a Swiss roof with six double dormer windows, which makes a very pleasing architectural effect. The large basement, which is well lighted and has a very high ceil-

poultry plant and who assist in giving instruction in poultry practice. By this experiment in student labor it is hoped to give the most promising students who have completed the regular, one year or special courses, an opportunity to do advanced work in experimentation and to acquire special skill in poultry management, which can only come through the personal handling of poultry day in and day out.

A certain wage is paid these student



ing, contains the incubator cellar, 30 feet square, slaughter house and egg room, 16 x 20, and a root cellar, 10 x 16. The first floor is to be divided into a large feed room for storing grain, cooking, weighing and mixing feed, a locker and wash room, reading room, museum, office and a carpenter shop. The second floor will contain six rooms, each about 15 feet square, with two dormer windows in each. Five of these rooms will be occupied by the poultry student assistants who do all the work at the

assistants which enables them to earn money while obtaining their education. Each student assistant is given complete charge and is held responsible for a certain part of the poultry work for a given time. The assignments are then changed so that during the year each student assistant will have had charge and will have done all of the various kinds of work on the University plant, which now contains fifteen varieties and about 500 individuals.

## The Cornell Countryman

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OCTOBER, 1904

### The Cornell Countryman

The Cornell Countryman is published by the students of the College of Agriculture. Last year there seemed to be some misunderstanding, outside of the college, in regard to this matter. Some thought it was a magazine published by the entire college, the faculty as well as the students. Several letters of business regarding the paper were received by members of the faculty. This is a wrong impression. The magazine is published by the student body alone. The advice of the members of the faculty is asked and much work is done by them for the Countryman. The faculty, however, is not responsible for the character of the magazine.

With this issue the Cornell Countryman begins its second volume. But little change will be made from the magazine of the previous year. The character of the articles during the year will be threefold; practical, educational and scientific. Special attention will be given to the practical problems which confront the average farmer of to-day. We also wish the Former Student column to continue as one of the strong features of the Magazine.

### To New Students

The Countryman bids those students who come to Cornell for the first time a hearty welcome. It also extends a greeting to those who come back as graduates or as undergraduates. We ask a hearty co-operation from you all. Remember that the Countryman belongs to all of us. Each student should feel as deep an interest in its success as do the members of the board. What the board does for the magazine is done gratuitously. We ask you then to take a pride in your college paper and be willing to help in every way possible.

### The Student's Obligation

In this connection we call attention to the article in our present issue by W. H. Collingwood. Mr. Collingwood's words strike home. It is a privilege to be a student at Cornell, but it is an opportunity that carries also an obligation. In proportion as we get much from our college, others will expect much from us. If this spirit of service and loyalty, however, is strong within us, when our college days are over, our lives will continue to be an honor to Cornell.

### Progressive Methods at Geneva Station

We publish in this issue an article by Dr. W. H. Jordan, director of the experiment station at Geneva. Our frontispiece represents the new barn at this station, the plans for which were made by Dr. Jordan himself. The primary purpose of the barn is experimental and its construction is such as to allow perfect control in experiment work, especially in the line of sanitary milk. It also offers opportunity for conducting feeding and di-

gestion experiments and investigations in storing forage crops. It is not a commercial barn, yet at the same time it offers many suggestions to the business farmer. Dr. Jordan is a Cornell man, having received his doctor's degree here. He is energetic and ambitious and since he has been at Geneva has completely reorganized the Station. With the exception of the Chemical Laboratory, every building now on the Station grounds has been built or completely changed by him.

**The National Nurseryman**

We wish to call attention to the change in editorial management of the *National Nurseryman*, the official organ of the American Association of Nurserymen and one of the leading trade journals among our nurserymen and fruit growers.

Mr. Ralph T. Olcott, the former editor, has retired from the company to devote himself more exclusively to other publishing enterprises. The new editor is Professor John Craig.

We cannot better state the purpose of the *National Nurseryman* than to quote a portion of Professor Craig's editorial foreword. He says: "The mission of the Journal is to act as a medium of exchange between nurserymen, a bureau of information for grower and planter alike. Primarily a trade journal, yet its sympathies are with the man who buys to make his home more homelike, or fills his orchard or vineyard, as well as the man who grows to sell. The interests of the two are inseparable. The better the tree the nurseryman grows, the larger his sales; the better the variety, the larger the demand. We would ask the confidence of the grower and

the planter on these matters of quality of stock and excellence of variety. Our columns will be open to a fair, above board, discussion of methods and intrinsic values. Let the *National Nurseryman* be a medium of practical as well as commercial information."

Professor Craig adds that the Journal wishes to bring the nurserymen into closer touch with the station worker, and to this end he announces a special department which shall make timely reviews of experiment station publications bearing upon the work of the tree grower as well as of the tree planter.

He concludes with these words:—"The paper must be thoroughly alive; it must be sane; it must be up-to-date and reliable. All these things it cannot be without your help. We confidently expect that our subscribers will not only be interested in reading the *Nurseryman*, but will wish to swell the news column by contributing timely items."

We know already that the *National Nurseryman* will maintain these standards, and we feel that in these last words Professor Craig has aptly expressed our own feeling in regard to the *Cornell Countryman*.

The editors of the *Countryman* wish to feel that they have the united interest and support of all Cornell agriculturists. An interest that takes pleasure in hearing what other Cornellians are doing, and a support that gladly contributes a news item or a helpful thought, and thus binds us together by a common interest in each other and by a common loyalty for the "better things" for which our college stands.

## GENERAL AGRICULTURAL NEWS

The Bureau of Soils, United States Department of Agriculture, has undertaken two soil survey areas in New York State during the season of 1904. The larger of these constitutes all of Cayuga County south of latitude 43 north, while the smaller area, adjoining it on the south, comprises practically all of the six northern townships of Tompkins County. The total area included in both maps will amount to something over 1,000 square miles.

Mr. J. E. Lapham and Mr. H. H. Bennett of the Bureau of Soils have charge of the Cayuga County area, and Professor J. A. Bonsteel of the Bureau of Soils, at present assigned to Cornell University, has been assisted by Mr. M. Quiroga, a graduate student in soils and agronomy, in the survey of Tompkins County.

The surveys will comprise lithographic maps accompanying a description of the soil types, methods of agriculture, special crops and adaptations of crops to soils. They will be published as separate reports and are expected to appear in one year's time.

The Tompkins County area includes more than a dozen distinct classes of soils. These are represented on the map classified according to varying proportions of clay, silt and sand in the soil. The correlation of several of these soils with those of the grape region of northern Chautauqua county will be of interest to the horticulturist.

In addition to the actual areal work it is probable that a limited amount of experimental work will soon be taken up in northern Tompkins county to determine the factors controlling soil fertility.

With the completion of these maps an almost unbroken belt of soil surveys will be formed extending from Lake Ontario to the Pennsylvania line. The Wayne county area of 1902 and the Syracuse area of 1903, join the Cayuga area of 1904 on the north. This is extended south by the Tomp-

kins County area which is separate from the Bigflats area of Chemung County by an interval of only ten or twelve miles. In this way all of the major soil types of Central and Western New York have been classified and studied in these five areas.

\* \* \*

In addition to its force engaged in forest-reserve work, the *Bureau of Forestry* has this summer 116 skilled men in the field. Of these 68, scattered in 26 States, are studying commercial trees, making working plans for woodlots and forests, and gathering data invaluable for the proper management of wooded areas. The remaining 48 experts, divided among 10 other States, are studying means of replacing the forest on lands from which it has been denuded, making planting plans for tracts to be forested, and planting in the western forest reserves. The data they will gather will be worked over and condensed by the office force this winter, and put into shape for practical use.

\* \* \*

An index to the Experiment Station Record has just been published by the U. S. Department of Agriculture in Washington. Everybody surely welcomes this useful key to a lot of valuable condensed material, an access to which has thus been made easy. The book fills a long-felt want in the line of reference books facilitating the use of the best agricultural and scientific literature.

\* \* \*

Cornell Nature Study Leaflets is the title of a new publication to appear in November. The work will comprise selections from Nature-Study Leaflets, Home Reading Courses, Junior Naturalists' Monthlies and other material previously published by the College. The book will include about 500 pages and will be published by the State and distributed by the College to all New York applicants who send the necessary postage.



# CORNELL NEWS

## NEW STUDENTS

### *To New Agricultural Students: Greeting!*

You are now entering on a new life. You are to devote yourselves to new ideals. Here are men and women who have given their lives to the acquiring of knowledge in special fields; this knowledge they will give you freely. More than that, they will give you advice, for they are men and women of experience and they have thought deeply on the problems that have confronted them. Every good teacher has a strong personality and individuality; this personality will influence you, even though it be so complex as to escape analysis. To the student, the teacher is usually more important than the subject that he teaches. You should aim to come into close touch with many teachers, even though their particular subjects for the time may not interest you. You need point of view more than you need facts.

You represent a new name in education. You are an agricultural student. Only in recent years has agriculture taken its place with the subjects that are considered to be worthy of attention in a college or university. Agriculture has been dignified; it is now an academic subject; it may be as efficient means of training the mind as other academic subjects; it has won its place with difficulty; it has little in tradition to sustain it as an educational force,—therefore it depends on you to maintain and to forward its newly acquired importance. The value of such education is proved by its products.

You are to associate with many men of many minds. It would be a mistake if you were to confine your acquaintanceship to the College of Agriculture. Here you have an opportunity to get a point of view from every angle upon any public question. If you quit college a narrow-minded man, you will not be an educated man,

however well you have passed your subjects.

Your life at college will be somewhat isolated from the strenuous affairs of the time. Herein will lie much of its value, for your ideals will have free play and your conclusions will be unbiased by contemporaneous contingencies. By the time you leave college, your habit of thought should be so well set that your judgments unconsciously will rest upon fundamental integrity and justice.

Those who teach are glad of every earnest new student, because it means one more opportunity to help uplift their fellow men. They are especially glad of every new student from the ranks of those who labor and who create wealth. The day of the agricultural student is coming, as it has come for those in other callings. You are greeted as one of those who is to enter into the new sentiment of a new time.

L. H. BAILEY.

\* \* \*

The whole of college life is not what one gets from books. An important part, and the part which makes the well rounded man, is found in one's social relations. If we wish to leave college well equipped for life, we should not neglect this training. For this purpose several organizations have been formed in the College. A short note of their history and character is given below. We urge all students to attend one or more of these meetings regularly. The associations which we make at such meetings will always be cherished and remembered.

\* \* \*

The Agricultural Association is the representative association of the agricultural student body. Here business is transacted, parliamentary rules observed, debates encouraged, and the outside and inside interests of the student body safeguarded. In addition to this, the social side of life is by no means neglected. Every stud-

ent, man or woman, will find it of greatest value to attend these meetings which alternate with those of the Agricultural Assembly, i. e., every other Tuesday night at eight o'clock in Morrill hall, room 19. Dear recollections of many distinguished professors and men of affairs are woven into the history of the Nestor among our clubs, an institution which had its beginning in the early seventies, when Cornell first began to exert an influence upon American agricultural education.

\* \* \*

The Lazy Club is one of the features of horticultural life at Cornell. It was originated by Professor Bailey in 1895, and was first a horticultural seminar which met in Professor Bailey's house on East Avenue. A year later the organization took on its present character of a weekly club open to all students interested in horticulture and holding a regular meeting every Monday night in the Lazy Club room at the Forcing House.

The Lazy Club, as its name suggests, is a distinctly informal affair. There is no membership except those who wish to attend, and no president, secretary, treasurer or parliamentary rules of any kind. Among its former members are noted horticulturists in the agricultural colleges and experiment stations all over our country. Professor Craig is always present at the meetings of the club and leads the discussion or introduces the speaker of the evening.

\* \* \*

The Poultry Association was established in the fall of 1903 as one of the results of the reorganization of the poultry department under Professor James E. Rice. The purpose of the association is to stimulate an interest and enthusiasm for the best in poultry work.

One strong feature of the association is the holding of an annual poultry show which is designed to familiarize the students with the different breeds and varieties of poultry, to give more thorough knowledge of the fine

points of judging fowls and to afford practice in the actual running of a show.

The association holds its meetings once a month in the Poultry Building, where various phases of the poultry industry and its allied sciences are discussed.

\* \* \*

The Winter-Course students have two organizations which hold regular meetings during the eleven weeks of the course and which are reorganized each year. The Dairy Club meets on Saturday evening in the Dairy Building and much interest is taken in the discussion of various phases of dairy work. The club of the winter agricultural students, called last year the Bailey Agricultural Club, meets every Thursday night in the Trophy room at Barnes hall. Enthusiasm has always attended the meetings of this club. From 1900—1903, when Professor Craig was associated with Cornell's Agricultural extension work throughout the State, the Club was known as the Craig Agricultural Club and in the winter of 1903 was directly instrumental in the organization of the Agricultural Experimenters' League of New York.

\* \* \*

The Agricultural Assembly meets semi-monthly on Tuesday night in the reading room at Barnes hall. Dean Bailey and the members of the Faculty wished to come into closer touch with the student body. For this purpose the Assembly was started. It held its first meeting last fall. At these gatherings Professor Bailey talks or reads, after which refreshments are served by the wives of the faculty and the women of the college, and a social good time is enjoyed. The Agricultural Assemblies have been attended by a spirit and enthusiasm that plainly shows their mission in the life of the agricultural student at Cornell. Never before has there been such a strong feeling of unity and common brotherhood in the College of Agriculture as has been brought out by these bi-weekly assemblies.

## CAMPUS NOTES

Professor Roberts will, this year deliver a series of lectures on agriculture in his old lecture room at the usual hour, 11 o'clock daily. Professor Roberts has enjoyed splendid health while in California and looks forward with pleasure to being once more with the students at Cornell.

\* \* \*

Professor Bailey has been abroad this summer, joining his family at Munich where they had gone late in March. The party journeyed through Switzerland, spent some time in France, and on the Channel Islands and made a considerable tour through southern and central England.

Professor Bailey studied the agricultural conditions in England, visiting the Royal Agricultural College at Cirencester, the South Eastern Agricultural College at Wye, the University College at Reading, which has a department of Agriculture, and the School of Horticulture for Women at Swanly. He also gave some attention to the general agricultural affairs of Great Britain.

In comparing European and American agricultural experimental systems Professor Bailey says that the European universities are ahead of the American universities in at least one important respect. They have a greater freedom to carry on long series of experiments for a number of years without needing to secure immediate results, i. e., the policies of the two systems are different.

He also remarks upon the fact that the European knows how to till expensive lands. A five or ten minutes' ride from any French or German city brings one right into the midst of cultivated fields. In Europe lands are tilled that in America would be considered too valuable for agricultural purposes.

In general Professor Bailey thinks that the tendency in Europe is for the original landlord system to break up and for individual ownership to come in, while in America our original

individual holdings are being amalgamated.

\* \* \*

Professor F. H. Burnette, horticulturist at the Louisiana State University, made a short visit on the Campus last August. Professor Burnette was a Cornell student in 1890 and this summer has been spending a portion of his vacation at his home in Phelps, N. Y. He was accompanied by Mr. Cecil McCrory who is Assistant Commandant of Cadets, Louisiana State University, Baton Rouge, Louisiana.

\* \* \*

'01, winter.—Burt Van Vleet of North Hector, N. Y., accompanied by his wife, paid a short visit to the University last month.

\* \* \*

Professor Charles S. Plumb visited the University early in September. Professor Plumb is professor of animal industry at the Ohio State University and while in town was the guest of Professor Hunt.

\* \* \*

'98, B. S. A.—A. R. Ward, '01, D. V. M., spent several weeks this summer visiting his parents in Ithaca. Professor Ward is veterinarian at the University of California.

\* \* \*

Mr. Vinton A. Clark, assistant horticulturist at the Geneva Experiment Station, spent several days on the Campus the latter part of August. Mr. Clark availed himself of the University library and of Professor Bailey's private library in securing certain historical references for the extensive work on varieties of apples which Professor Beach is preparing for publication.

\* \* \*

Captain C. L. Watrous in company with Professor Beach of the Geneva Experiment Station was in town on August 19 to see Professor Craig and visit the horticultural department. Colonel Watrous is retiring president of the American Pomological Society, and is one of the best known nurserymen in the United States.

### New Campus Buildings

The University Campus presents this summer not quite such a peaceful and quiet appearance as it does otherwise during vacations.

Hardly have Sibley college and Stimson hall assumed an air of completeness, when we see the whole eastern side of the Campus torn up. The foundation walls of the Goldwin Smith Hall of Humanities are rising rapidly, as the excavating work has been finished. With the old Dairy building as its north wing the new hall will be one of the largest and most imposing on the Campus. Further east where the Rockefeller Hall of Physics is being built a lot of stone cutters are dressing the sandstone blocks for that monument to science. The earthwork there is about finished and the walls will soon rise above ground.

Yet further east we must travel to follow the expansion of the University. The large quadrangle south of the barn and poultry plant is the final selection for the New York State College of Agriculture. The plans are now being executed by the State architect and in two years we hope to have a college there which will give us rooms large enough to hold our classes as well as gather together all the agricultural students for such pleasant diversions as will help to tie them closer to each other, to the faculty, to their alma mater and to the agricultural interests of New York State.

### Farm Jottings by Mr. Frazer

Six hundred hills of Early Michigan potatoes were weighed recently, and the tubers counted. Many plants yielded but one potato, while others yielded as high as seventeen. One plant yielded  $\frac{1}{2}$  oz. of tuber, others  $2\frac{1}{2}$  pounds or eighty times as much at the first. The importance of selection is obvious and we feel that the plant and not the tuber is the unite of selection.

Several potato plants have been found which are as yet little affected

by blight (*Phytophthora infestans*). They are being watched with interest as most of the others around them are attacked. Spraying has been omitted in order to see whether some disease-resisting potato can be found.

Apparently the most promising plat of alfalfa in the fertilizer experiment plats is, at present, the one which was manured with farm manure at the rate of twenty loads per acre, lime at the rate of 1,000 pounds per acre and soil from a good alfalfa field at the rate of 400 pounds per acre. Thus far liming has been beneficial wherever tried.

Leaf spot (*Pseudopeziza* sp.) has been very troublesome on alfalfa this year. It appears as reddish spots on the leaves in the spring and dark spots in the fall. It causes loss of leaves. The winter spore stage, which appears in the center of the dark spots, is now forming and specimens will soon be collected. Mr. Whetzel, the assistant pathologist of the Station, hopes to work out the life history of this trouble.

A bacterial rot has caused considerable loss in the turnips on the experimental plats during July. Since then it has appeared on the Yellow Aberdeen and Scotch Yellow Turnips destroying many of them. It has not yet damaged the roots of the Rutabagas or of the Rutabaga-turnip "Pioneer" which is one of Garton's new hybrids. Cultures have been prepared and inoculation experiments are now in progress, although the identity of the bacillus is not determined. This soft rot has been rather prevalent in parts of Vermont during the past season.

In July, the flea beetles (*Systema frontalis*) did considerable damage to alfalfa, Soybeans, cowpeas and the grass Tawny Foxtail. As many as thirty were seen on one plant at the same time. Spraying with arsenate of lead was tried, but apparently did not reduce the pest very much. The beetles moved on naturally to new areas in from ten to fourteen days.

## FORMER STUDENTS

'82, A. B.—Frederick D. Chester, '87, M. S., is director of the board of health laboratory at Newark, Delaware, and also mycologist of the Delaware Experiment Station. Professor Chester's recent bulletin on bacteriological analysis of soils has attracted much attention.

'01, B. S. A.—M. M. Underdown, who was in agricultural work in Brazil, has returned to the United States and last July was married to Miss Josephine Prince of Keating Summit, Pennsylvania. Miss Prince was a student in the Ithaca Conservatory of Music.

Mr. Underdown has accepted the position of agricultural manager for the Queens Water Company which furnishes a part of the Brooklyn water supply and has its wells at Far Rockaway, Long Island.

The Queens Water Company has purchased 1,100 acres of land for protecting their water rights at Far Rockaway, and intends to develop these lands for agricultural purposes. Several hundred acres are already available and more will be cleared and drained and brought under cultivation. Some of the company's land lies in the salt marsh region and has been diked and provided with flood gates which allow the natural drainage of the streams but close at the rising of the tide. Such development of agricultural lands within twenty miles of America's greatest market is a most promising enterprise. Mr. Underdown has already begun his operations at Far Rockaway.

'01, dairy.—Frank S. Wright of Windsor, N. Y., who, after his dairy course in 1901, was in charge of the Gracie Creamery at Cortland, N. Y., has now returned to accept the position of herdsman at the University.

'02, special.—Charles R. Mathews is still with the Winnetka Collie Kennels at Meadow Farm, Winnetka, Illinois.

'04, B.S.A.—Walter S. Brown has been called to the position of assist-

ant horticulturist under Professor E. P. Sandsten, Cornell Ph. D., '03. One of our editorial staff, Christian Bues, who has been travelling in Wisconsin all summer as state inspector of orchards, brings back a warm greeting from the former Cornellians at Madison.

'04, B.S.A.—Hiram E. Kinne demonstrated his keen business ability by successfully engineering our last agricultural banquet, the surplus of which he donated to the Cornell Countryman, and has now definitely established himself as a live stock commission agent with his headquarters in Ithaca, N. Y.

'04, B.S.A.—Albert R. Mann is among the highlands of the Piedmont plateau, eighteen miles from Baltimore, where he is indentifying himself with the agricultural department of Oread, the popular new school for young men and young women founded by Mr. Henry D. Perky of Worcester, Massachusetts. Mann was prominent in the different phases of our college life and his loyal spirit will long be remembered.

'04, B.S.A.—Walter Ira Thompson was taken very sick towards the close of the University term and was unable to be with his class at graduation. His diploma was sent to him at his home in Holland Patent. Thompson has had a hard summer of it, and at one time was in a very critical condition. We are now thankful to learn that his strength is slowly but surely returning.

'04, special.—Miss Mary C. Shepperson, who took the two-year course in nature-study is now in charge of nature-study work in the public schools of Athens, Georgia. Miss Shepperson was on the Countryman's first board of editors and was active and untiring in her interest for the welfare of the paper. She was one of the speakers at our last agricultural banquet, and will be remembered by all who attended the agricultural assemblies last year.



01, Special.—Mrs. Mary B. Coulston died last July in Oakland, California, while engaged in summer school work at the University of California.

Mrs. Coulston was for ten years associated with the magazine "Garden and Forest," first as pioneer writer, then as associate editor and finally as editor-in-chief. In this capacity she became well acquainted with the leading horticulturists of the country.

After "Garden and Forest" was discontinued in 1900 by its owner, Professor C. S. Sargent, Mrs. Coulston came to Cornell for a year of special study in forestry and horticulture. While here she spent considerable time in Professor Bailey's office assisting in the work on the *Cyclopedia of American Horticulture*, the third volume of which appeared in the spring of 1901.

Since that time Mrs. Coulston has been actively engaged in park improvement work in California and as the San Diego "Union" said, she was one of the brightest, noblest and best women who have ever made their home in San Diego.

'03, Special.—Eben Norton was accidentally shot this summer in Dhouda, Poona, India. He was a teacher in his father's missionary school for boys, which is an industrial, educational and religious institution in

which the attempt is made to bring the native boys to a higher plane.

Mr. Norton was a graduate of the Brockport Normal School, Brockport, N. Y., and took up special agricultural work at Cornell to fit himself to teach the natives in India more modern methods of farming. He had to work his way while in the University, but nevertheless found time to help Mrs. E. W. Beebie in her city missionary work, and also Rev. C. M. Sanford of the Free Methodist Church, of whom he became a strong friend.

Mr. Norton was very conscientious and thorough in his studies and was well prepared for work in his chosen field.

'04, B. S. A.—D. I. Hawkesworth died last July in Altoona, Pennsylvania. He was taken from the Infirmary in the hope that a change to another part of the country would do him good, but his disease, tuberculosis, had too strong a hold on him, and he was unable to shake it off. Hawkesworth was one of the few negro graduates in the University class of 1904, and was given his diploma while still in the Infirmary. He was a thorough, capable student and had already been offered a professorship of chemistry in Booker T. Washington's school at Tuskegee, Alabama. His home was in Washington, D. C.

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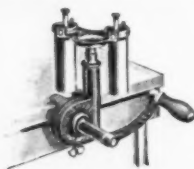
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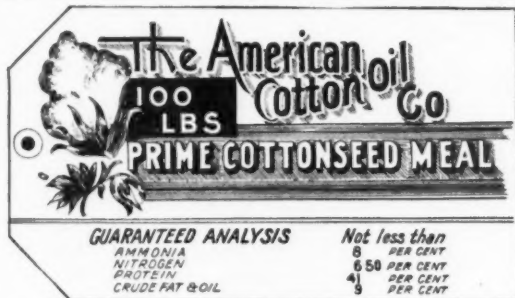
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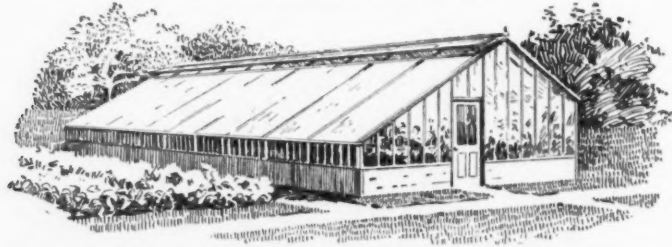
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